

FIGURE 2-2 Population distribution. People are not distributed uniformly across Earth's surface (top). Compare to the distribution of global climates, modified from a map developed by Vladimir Köppen (bottom). Figure 1-14 is more detailed version of this map.

climate. The regions all are located in the Northern Hemisphere between 10° and 55° north latitude, with the exception of part of the Southeast Asia concentration. Despite these similarities, we can see significant differences in the pattern of occupancy of the land in the five concentrations.

East Asia

One-fifth of the world's people live in East Asia. The region, bordering the Pacific Ocean, includes eastern China, the islands of Japan, the Korean peninsula, and the island of Taiwan.

Five-sixths of the people in this concentration live in the People's Republic of China, the world's most populous country. China is the world's third-largest country in land area, but much of its interior is sparsely inhabited mountains and deserts. The Chinese population is clustered near the Pacific Coast and in several fertile river valleys that extend inland, such as the Huang and the Yangtze. Although China has 26 urban areas with more than 2 million inhabitants and 52 with more than 1 million, two-thirds of the people live in rural areas where they work as farmers.

In Japan and South Korea, population is not distributed uniformly either. More than one-third of the people live in three

ge metropolitan areas—Tokyo and Osaka in Japan, and Seoul in South Korea—that cover less than 3 percent of the two countries' land area. In sharp contrast to China, more than three-fourths of all Japanese and Koreans live in urban areas and work in industrial or service jobs.

South Asia

Other one-fifth of the world's people live in South Asia, which includes India, Pakistan, Bangladesh, and the island of Sri Lanka. India, the world's second most populous country, contains more than three-fourths of the South Asia population concentration.

The most important concentration of people within South Asia lives along a 1,500-kilometer (900-mile) corridor from Lahore, Pakistan, through India and Bangladesh to the delta of Bengal. Much of this area's population is concentrated along the plains of the Indus and Ganges rivers. Population is also heavily concentrated near India's two long coastlines—the Arabian Sea to the west and the Bay of Bengal to the east. Like the Chinese, most people in South Asia are farmers living in rural areas. The region contains 21 urban areas with more than 1 million inhabitants and 55 with more than 1 million, but only one-fourth of the total population lives in an urban area.

Southeast Asia

Third important Asian population cluster, and the world's fourth largest (after Europe, described next), is in Southeast Asia. A half-billion people live in Southeast Asia, mostly on archipelagos of islands that lie between the Indian and Pacific Oceans. These islands include Java, Sumatra, Borneo, Sulawesi, and the Philippines. The largest concentration is on the island of Java, inhabited by more than 100 million people.

Indonesia, which consists of 13,677 islands, including Java, is the world's fourth most populous country. Several islands that belong to the Philippines contain high population concentrations, and population is also clustered along several river valleys and deltas at the southeastern tip of the Asian mainland, known as Indochina. Like China and South Asia, the Southeast Asia concentration is characterized by a high percentage of people working as farmers in rural areas.

The three Asian population concentrations together comprise more than half of the world's total population, but together they live on less than 10 percent of Earth's land area. The same held true 2,000 years ago, when approximately half of the world's population was found in these same regions.

Europe

Combining the populations of Western Europe, Eastern Europe, and the European portion of Russia forms the world's third-largest population cluster, one-ninth of the world's people. The region includes four dozen countries, ranging from Monaco, with 1 square kilometer (0.7 square miles) and a population of 32,000, to Russia, the world's largest country in land area when its Asian part is included.

In contrast to the three Asian concentrations, three-fourths of Europe's inhabitants live in cities, and less than 20 percent are farmers. A dense network of road and rail lines links settlements. The highest population concentrations in Europe are near the coalfields of England, Germany, and Belgium, historically the major source of energy for industry.

Although the region's temperate climate permits cultivation of a variety of crops, Europeans do not produce enough food for themselves. Instead, they import food and other resources from elsewhere in the world. The search for additional resources was a major incentive for Europeans to explore and colonize other parts of the world during the previous six centuries. Today, Europeans turn many of these resources into manufactured products.

Other Population Clusters

The largest population concentration in the Western Hemisphere is in the northeastern United States and southeastern Canada. This cluster extends along the Atlantic Coast from Boston to Newport News, Virginia, and westward along the Great Lakes to Chicago. About 2 percent of the world's people live in the area. Like the Europeans, most Americans are urban dwellers; less than 5 percent are farmers.

Another 2 percent of the world's population is clustered in West Africa, especially along the south-facing Atlantic coast. Approximately half of the West Africa concentration is found in Nigeria, the most populous country in Africa, and the other half is divided among several small countries west of Nigeria. As in the three Asian concentrations, most West Africans work in agriculture, although the region has 6 urban areas with more than 2 million inhabitants and 16 with more than 1 million.

Sparsely Populated Regions

Human beings avoid clustering in certain physical environments. Compare the top and bottom maps in Figure 2-2. Relatively few people live in regions that are too dry, too wet, too cold, or too mountainous for activities such as agriculture. The portion of Earth's surface occupied by permanent human settlement is called the *ecumene*.

The areas of Earth that humans consider too harsh for occupancy have diminished over time, whereas the *ecumene* has increased (Figure 2-3). Seven thousand years ago humans occupied only a small percentage of Earth's land area, primarily in the Middle East, Eastern Europe, and East Asia. Even 500 years ago much of North America and Asia lay outside the *ecumene*. Still, approximately three-fourths of the world's population live on only 5 percent of Earth's surface. The balance of Earth's surface consists of oceans (about 71 percent) and less intensively inhabited land.

Dry Lands

Areas too dry for farming cover approximately 20 percent of Earth's land surface. The two largest desert regions in the world lie in the Northern Hemisphere between 15° and 50° north latitude and in the Southern Hemisphere between 20° and

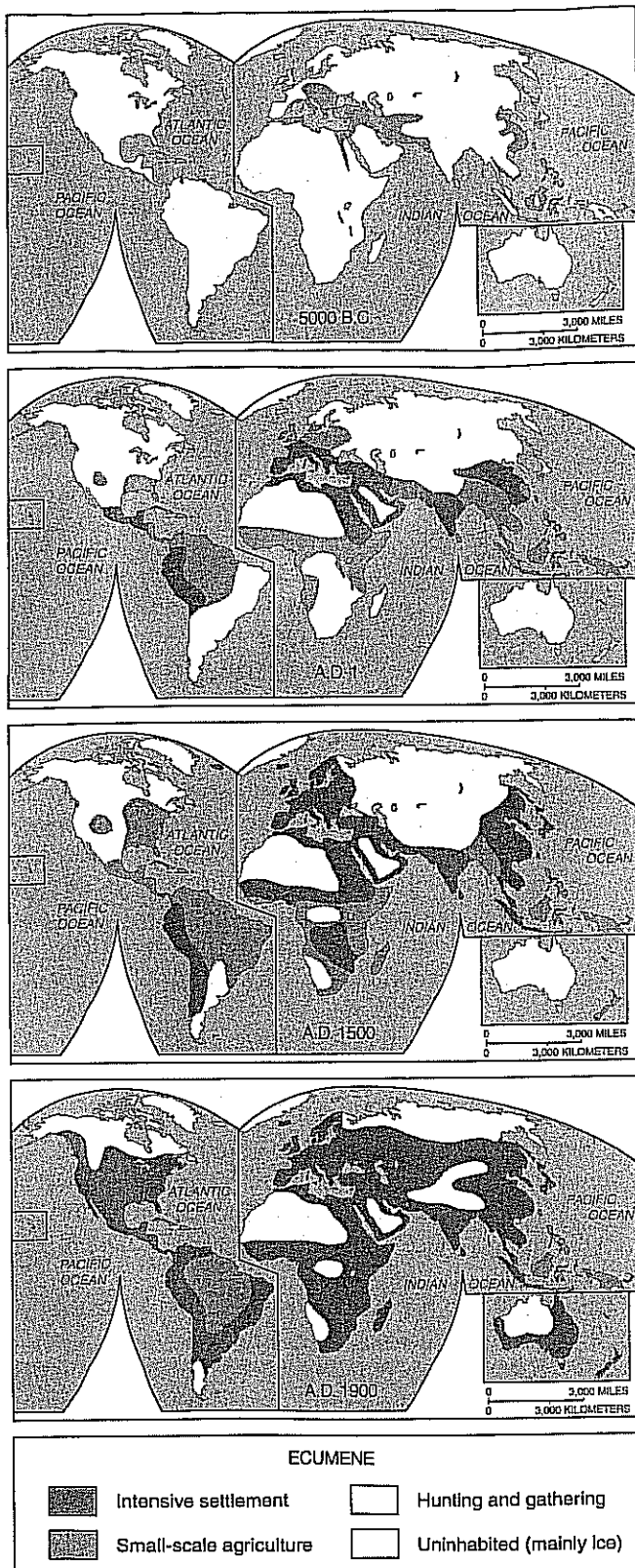


FIGURE 2-3 Ecumene. The portion of Earth occupied by permanent human settlement—the ecumene—has expanded from the Middle East and East Asia to encompass most of the world's land area.

50° south latitude. The largest desert region, extending from North Africa to Southwest and Central Asia, is known by several names, including the Sahara, Arabian, Thar, Takla Makan, and Gobi deserts. A smaller desert region, in the Southern Hemisphere, comprises much of Australia. Earth's desert regions are shown in Figure 2-2 (bottom). Regions where desert conditions are advancing appear in Figure 10-14.

Deserts generally lack sufficient water to grow crops that could feed a large population, although some people survive there by raising animals, such as camels, that are adapted to the climate. By constructing irrigation systems, people can grow crops in some parts of the desert. Although dry lands are generally inhospitable to intensive agriculture, they may contain natural resources useful to people—notably, much of the world's oil reserves. The increasing demand for these resources has led to a growth in settlements in or near deserts.

Wet Lands

Lands that receive very high levels of precipitation may also be inhospitable for human occupation. These lands are located primarily near the equator between 20° north and south latitude in the interiors of South America, Central Africa, and Southeast Asia. Rainfall averages more than 1.25 meters (50 inches) per year, with most areas receiving more than 2.25 meters (90 inches) per year. The combination of rain and heat rapidly depletes nutrients from the soil and thus hinders agriculture.

Precipitation may be concentrated into specific times of the year or spread throughout the year. In seasonally wet lands, such as those in Southeast Asia, enough food can be grown to support a large population (see the rice production map, Figure 10-6).

Cold Lands

Much of the land near the North and South poles is perpetually covered with ice or the ground is permanently frozen (permafrost). The polar regions receive less precipitation than some Central Asian deserts, but over thousands of years the small annual snowfall has accumulated into thick ice. Consequently, the polar regions are unsuitable for planting crops, few animals can survive the extreme cold, and few human beings live there.

High Lands

Finally, relatively few people live at high elevations. The highest mountains in the world are steep, snow covered, and sparsely settled. For example, approximately half of Switzerland's land is more than 1,000 meters (3,300 feet) above sea level, and only 5 percent of the country's people live there.

We can find some significant exceptions, especially in Latin America and Africa. People may prefer to occupy higher lands if temperatures and precipitation are uncomfortably high at lower elevations. In fact, Mexico City, one of the world's largest cities, is located at an elevation of 2,243 meters (7,360 feet).